Claims:

1. An extruder head for extrusion blow-molding plastic containers, with

- a ring gap nozzle having a mandrel (1) and a ring-shaped nozzle body (2);
- an elastically deformable sleeve (3); and
- setting devices (4) for radially deforming the elastic sleeve (3);

whereby the sleeve (3) arranged at the end on the nozzle outlet side defines a nozzle gap whose width is variable by axial setting movements of the mandrel (1) and/or the nozzle body (2), and whose geometry can be influenced by deforming the sleeve (3) while a hose-shaped preformed blank is being extruded, and whereby the sleeve (3) is radially movably guided on sliding surfaces (7, 8) supporting the sleeve (3) in the upward and downward directions; characterized in that the sleeve (3) is realized from the upper end on the inlet side to the outlet of the nozzle in the form of a cylinder or tube with a longitudinal profile approximated to the shape of the cylinder, whereby the lower edge (15) of the sleeve (3) on the inside of the tube shapes the exiting cross-section of the stream of melt exiting from the ring-gap nozzle.

2. The extruder head according to claim 1, characterized in that the lower edge (15) of the sleeve (3) is rounded off or has a profiled edge (16) shaping the exiting stream of melt.

3. The extruder head according to claim 2, characterized in that the profiled edge (16) is realized in the form of a conical chamfered surface.

4. The extruder head according to any one of claims 1 to 3, characterized in that at least at one end, the sleeve (3) has a ring-shaped collar on the outer side, said collar serving as a sliding surface.

5. The extruder head according to any one of claims 1 to 3, characterized in that at least at one end, the sleeve (3) has a plurality of projections arranged on the outer periphery, said projections serving as the sliding surfaces.

6. An extruder head for extrusion blow-molding plastic containers, comprising

- A ring gap nozzle having a mandrel (1) and a ring-shaped nozzle body (2);
- An elastically deformable sleeve (3); and
- Setting devices for radially deforming the elastic sleeve (3);

whereby the sleeve (3) arranged at the end on the nozzle outlet side defines an annular gap whose width is variable by axial setting movements of the mandrel (1) and/or nozzle body (2), and whose geometry can be influenced by deforming the sleeve (3) while a hose-like preformed blank is being extruded; and whereby the sleeve (3) is radially movably guided on sliding surfaces (7, 8) supporting the sleeve (3) in the upward and downward directions; characterized in that

- the sleeve (3) arranged in the body of the nozzle has a conical widening toward the end on the nozzle outlet side and that the inside diameter (d_1) of the sleeve (3) measured on the upper face is smaller than the inside diameter (d_2) of the sleeve (3) on the nozzle outlet; and that
- the wall profile of the sleeve (3) and the height of the points of force application of the setting devices (4) along the sleeve (3), said points of force application being located out of center in the longitudinal direction of the sleeve (3), are coordinated with one another in such a way that the upper face of the sleeve (3) guided on a sliding surface (7) of the nozzle body (2) at least approximately maintains its plane parallelism in relation to the sliding surface when the sleeve (3) is deformed.

7. An extruder head for extrusion blow-molding plastic containers, comprising

- a ring gap nozzle having a mandrel (1) and a ring-shaped nozzle body(2);
- an elastically deformable sleeve (3); and
- setting devices (4) for radially deforming the elastic sleeve (3);

whereby the sleeve (3) arranged at the end of the nozzle outlet side defines a nozzle gap whose width is variable by axial setting movements of the mandrel (1) and/or nozzle body (2), and whose geometry can be influenced by deforming the sleeve (3) as a hose-shaped preformed blank is being extruded; and whereby the sleeve (3) is radially movably guided on sliding surfaces (7, 8) supporting the sleeve (3) in the upward and downward directions; characterized in that

- the sleeve (3) arranged in the body of the nozzle has a conical widening toward the end on the nozzle outlet side, and that the inside diameter (d_1) of the sleeve (3) measured on the upper face is smaller than the inside diameter (d_2) of the sleeve on the nozzle outlet;

- the points of force application of the setting devices (4) are fixed at half of the height of the sleeve (3); and that
- the sleeve (3) is provided with a collar (3) at least on one end, such collar being realized in such a way that the upper face of the sleeve (3) guided on a sliding surface (7) of the nozzle body (2) at least approximately maintains its plane parallelism in relation to the sliding surface when the sleeve (3) is deformed.

8. The extruder head according to claim 6 or 7; characterized in that the inlet zone of the sleeve (3) is realized in the form of a cylinder or tube with a longitudinal profile adapted to the shape of the cylinder.

9. The extruder head according to claim 6 or 7, characterized in that the sleeve (3) has conical widenings at both ends, whereby the conical widening at the nozzle outlet is larger than the widening at the upper end on the inlet side.

10. The extruder head according to claim 9, characterized in that the sleeve (3) has a cylindrical center section (5) located between the conical widenings (6, 6').

11. An extruder head for extrusion blow-molding plastic containers, comprising

- a ring gap nozzle having a mandrel (1) and a ring-shaped nozzle body (2);
- an elastically deformable sleeve (3); and
- setting devices (4) for radially deforming the elastic sleeve (3);

whereby the sleeve (3) arranged at the end on the nozzle outlet side defined an annular gap whose width is variable by axial setting motions of the mandrel (1) and/or nozzle body (2), and whose geometry can be influenced by deforming the sleeve (3) as a hose-shaped preformed blank is being extruded; and whereby the sleeve (3) is radially movable on sliding surfaces (7, 8) supporting the sleeve (3) in the upward and downward directions; characterized in that

- the sleeve (3) arranged on the mandrel (1) has a conical widening toward the upper end on the inlet side and/or a conical taper toward the end on the nozzle outlet side, and that the outside diameter (D_1) of the sleeve measured on the upper face is larger than the outside diameter (D_2) of the sleeve on the nozzle outlet; and that

- the wall profile of the sleeve (3) and the height of the points of force application of the setting devices (4) along the sleeve (3) are coordinated with each other in such a way that the upper face of the sleeve (3) guided on a sliding surface (7) of the nozzle body (2) maintains at least approximately its plane parallelism in relation to the sliding surface when the sleeve (3) is deformed.

12. The extruder head according to claim 11, characterized in that the sleeve (3) arranged on the mandrel (1) has a cylindrical shape and a conically widening collar (9) only toward the upper end on the inlet side.

13. The extruder head according to any one of claims 1 to 12, characterized in that the diameter (d_1, D_1) of the sleeve (3) at the upper end on the inlet side is coordinated with the inside diameter (d_2, D_2) of the sleeve (3) at the nozzle outlet in dependence on the pressure profile adjusting in the melt channel in the direction of flow in such a way that the axial force caused by the pressure of the melt to act downwardly on the sleeve (3) in the inlet zone can be largely compensated; however, at least by 50% by a lower pressure of the melt prevailing at the nozzle outlet, said pressure exerting an upwardly directed force on the sleeve (3).

14. The extruder head according to any one of claims 1 to 13, characterized in that the points of force application of the setting devices (4) are arranged in a cross-sectional plane, said plane being fixed in such a way that with maximum deformation of the sleeve, distortions of 60 μm at the most occur on the upper face of the sleeve (3) in the axial direction.

15. The extruder head according to any one of claims 1 to 14, characterized in that the sleeve (3) has at least one outside collar, said collar being realized in such a way that the moment of area deviation determined for the wall profile of the sleeve comes to approximately zero in the center of gravity of the area, and that the points of force application of the setting devices (4) are arranged in a cross-sectional plane in which the center of gravity of the area of the wall profile is disposed viewed in the longitudinal section.

16. The extruder head according to any one of claims 1 to 14, characterized in that with a wall profile of the sleeve (3) whose moment of area deviation determined in the center of gravity of the area substantially deviates from zero, the point of force application of the setting devices are arranged offset versus the cross-sectional plane in which the center of gravity of the area of the wall profile

is disposed viewed in the longitudinal section, for the purpose of compensating moment of area deviation.

17. The extruder head according to any one of claims 1 to 16, characterized in that the setting devices (4) are connected with the sleeve (3) below a line of action of force extending inclined upwardly.

18. The extruder head according to any one of claims 1 to 17, characterized in that the sleeve (3) radially movably abuts sliding surfaces (7, 8) of the nozzle body (2) with its upper and lower faces.

19. The extruder head according to any one of claims 1 to 18, characterized in that the sleeve (3) is arranged without lower support on the face side on the outlet of the ring gap nozzle and has a supporting surface for the radially movable support, said supporting surface being arranged on the periphery of the sleeve (3) with a spacing from the lower end of the sleeve.

20. The extruder head according to claim 19, characterized in that the sleeve (3) has a collar (9) at its upper end, said collar being radially movably held between sliding surfaces (7, 8).

21. The extruder head according to claim 19, characterized in that the sleeve (3) has a support collar (11) below the cross-sectional plane in which the setting devices are applied, said support collar radially movably resting on a holding ring (10); and that a thin-walled apron (12) limiting the melt channel is molded on below the support collar (11).

22. The extruder head according to claim 19, characterized in that the sleeve (3) cams (13) on the peripheral side, said cams radially movably resting on a holding ring (10) and being coupled to the setting devices (4).

23. The extruder head according to claim 22, characterized in that the sleeve (3) has an undercut below the cams (13), said undercut forming an annular support surface adjoining the underside of the cams (13) without a step.

24. The extruder head according to any one of claims 1 to 23, characterized in that the sleeve (3) is acted upon on the outer side of its jacket by a pressurized fluid, said fluid compensating an axial force exerted on the sleeve by the pressure in the melt channel.

25. An extruder head for extrusion blow-molding plastic containers, comprising

- a ring gap nozzle having a mandrel (1) and a ring-shaped nozzle body (2);
- an elastically deformable sleeve (3); and
- setting devices (4) for radially deforming the elastic sleeve (3)'

whereby the sleeve (3) arranged at the end of the nozzle outlet side defines a nozzle gap whose gal width is variable by axial setting movements of the mandrel (1) and/or the nozzle body (2), and whose geometry can be influenced by deformation of the sleeve (3) while a hose-shaped preformed blank is being extruded, and whereby the sleeve (3) is radially movably guided on sliding surfaces (7, 8) supporting the sleeve (3) in the upward and downward directions, characterized in that the sleeve (3) is supported in the axial direction on springs (14) or force-generating elements having the same effect, said springs or elements compensating an axial force exerted on the sleeve (3) by the pressure of the melt.

26. The extruder head according to claim 25, characterized in that the force-generating elements can be cyclically controlled or regulated depending on the prevailing pressure of the melt.